**DERWENT-ACC-** 2003-609185

NO:

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WEEK:

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TITLE:

Tungsten carbide base hard alloy used for producing cutting tools contains (titanium,

tungsten, tantalum, niobium, zirconium) carbide solid solution

INVENTOR: XU, L

PATENT-ASSIGNEE: ZHUZHOU HARD ALLOY GROUP CO LTD[ZHUZN]

PRIORITY-DATA: 2002CN-0139684 (October 10, 2002)

**PATENT-FAMILY:** 

PUB-NO PUB-DATE LANGUAGE PAGES MAIN-IPC

CN 1425787 A June 25, 2003 N/A 000 C22C 029/08

APPLICATION-DATA:

PUB-NO APPL-DESCRIPTOR APPL-NO APPL-DATE

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2002CN-0139684 October 10, 2002

INT-CL (IPC): C22C029/08

ABSTRACTED-PUB-NO: CN 1425787A

## **BASIC-ABSTRACT:**

NOVELTY - Tungsten carbide base hard alloy contains (titanium, tungsten, tantalum, <u>niobium, zirconium</u>) <u>carbide</u> solid solution. Substituting tantalum partially with niobium and zirconium with relatively abundant source and low cost makes the alloy lower in production cost. In addition, niobium carbide can form fine crystal grains, zirconium carbide can raise the high temperature performance of the alloy, and substituting tantalum partially with niobium and zirconium will not lower the performance of the alloy. The alloy is suitable for producing cutting tools.

CHOSEN-DRAWING: Dwg.0/0

**DERWENT-CLASS:** L02 M26

CPI-CODES: L02-F03; L02-H02A; M26-B12; M26-B12T;

1/12/05, EAST Version: 2.0.1.4

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## **Basic Abstract Text - ABTX (1):**

NOVELTY - Tungsten carbide base hard alloy contains (titanium, tungsten, tantalum, <u>niobium, zirconium</u>) <u>carbide</u> solid solution. Substituting tantalum partially with niobium and zirconium with relatively abundant source and low cost makes the alloy lower in production cost. In addition, niobium carbide can form fine crystal grains, zirconium carbide can raise the high temperature performance of the alloy, and substituting tantalum partially with niobium and zirconium will not lower the performance of the alloy. The alloy is suitable for producing cutting tools.

## Title - TIX (1):

Tungsten carbide base hard alloy used for producing cutting tools contains (titanium, tungsten, tantalum, **niobium**, **zirconium**) carbide solid solution

## Standard Title Terms - TTX (1):

TUNGSTEN CARBIDE BASE HARD ALLOY PRODUCE CUT TOOL CONTAIN TITANIUM TUNGSTEN TANTALUM <u>NIOBIUM ZIRCONIUM CARBIDE</u> SOLID SOLUTION

1/12/05, EAST Version: 2.0.1.4